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IMPROVED METHODS FOR THE DIAGNOSIS AND TREATMENT OF DIABETES ABSTRACT OF THE DISCLOSURE

Assays for the detection of diabetes and prediabetic status rely on exposing patient serum samples to purified ligand capable of binding autoantibodies specific for a 64kD autoantigen present on pancreatic β -The purified ligand is usually purified glutamic cells. acid decarboxylase (GAD) or a fragment or analog thereof. Preferably, the assays will detect the presence of antibodies to both lower molecular weight GAD and higher molecular weight GAD since diabetic and prediabetic status may be associated with only one of these two The assays can be performed using conventional protocols, such as radioimmunoassay, enzyme-linked immunosorbent assay, and enzyme assay. Methods for treating diabetes comprise administering pharmaceutical compositions including the purified ligand, particularly when coupled to an immunoglobulin or lymphoid cell to induce tolerance. Alternatively, tolerance may be induced by administering attenuated T-helper cells, or isolated T-cell receptors, where the T-helper cells have been isolated based on their reactivity with GAD or equivalent ligand.